

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A lithographic apparatus comprising:
 - an illumination system configured to provide a beam of radiation;
 - a support structure configured to hold a patterning device, the patterning device configured to impart the beam with a pattern in its cross-section;
 - a substrate table configured to hold a substrate;
 - a projection system configured to project the patterned beam onto a target portion of the substrate;
 - a liquid supply system configured to provide an immersion liquid to a space between the substrate and the projection system, the liquid supply system comprising a barrier member extending along at least a part of the boundary of the space and being in a position relative to an object on the substrate table so that any capillary pressure generated by the immersion liquid between the barrier member and the object is not large enough to constrain the immersion liquid in the space;
 - at least one inlet to supply immersion liquid, the at least one inlet not provided on the substrate table; and
 - at least one outlet to remove immersion liquid, the at least one outlet being radially outwardly of the barrier member,
 - wherein no seal is provided and coupled between the barrier member and the object.
2. (Cancelled)
3. (Previously Presented) An apparatus according to claim 1, wherein the at least one outlet is on the substrate table.
4. (Previously Presented) An apparatus according to claim 1, wherein the at least one outlet is suspended above the substrate table.
5. (Original) An apparatus according to claim 1, wherein the object comprises the substrate and a distance between the barrier member and the substrate is at least 50 μm .

6. (Original) An apparatus according to claim 4, wherein the object comprises the substrate and a distance between the barrier member and the substrate is one of substantially 100 μm , 150 μm or 300 μm .
7. (Original) An apparatus according to claim 1, wherein the barrier member is mechanically isolated from the projection system.
8. (Previously Presented) An apparatus according to claim 1, wherein the barrier member is connected to a base frame that supports the substrate table, or a projection system frame that supports the projection system, or both.
9. (Original) An apparatus according to claim 1, wherein the barrier member is free to move in the direction of an optical axis of the projection system.
10. (Previously Presented) An apparatus according to claim 1, further comprising an actuator configured to adjust a height, or a tilt, or both, of the barrier member relative to the object.
11. (Previously Presented) An apparatus according to claim 1, wherein the object comprises the substrate, or a sensor, or a shutter, or any combination of the foregoing.
12. (Original) An apparatus according to claim 1, wherein the barrier member comprises at least one inlet to supply the immersion liquid to the space.
13. (Previously Presented) A device manufacturing method comprising:
 - providing an immersion liquid to a space between a substrate on a substrate table and a projection system using at least one immersion liquid outlet not provided on the substrate table, a barrier member extending along at least a part of the boundary of the space;
 - allowing immersion liquid to leak between the barrier member and an object on the substrate table by positioning the barrier member, or the object, or both, so that any capillary pressure generated by the immersion liquid between the barrier member and the object is not large enough to constrain the immersion liquid in the space;

removing immersion liquid through at least one outlet positioned radially outwardly of the barrier member; and

projecting a patterned beam of radiation onto a target portion of the substrate using the projection system.

14. (Cancelled)

15. (Previously Presented) A device manufacturing method according to claim 13, wherein the at least one outlet is positioned on the substrate table.

16. (Original) A device manufacturing method according to claim 13, wherein the object comprises the substrate and a distance between the barrier member and the substrate is at least 50 μm .

17. (Original) A device manufacturing method according to claim 13, wherein the barrier member is mechanically isolated from the projection system.

18. (Original) A device manufacturing method according to claim 13, comprising moving the barrier member in the direction of an optical axis of the projection system.

19. (Previously Presented) A device manufacturing method according to claim 13, wherein the object comprises the substrate, or a sensor, or a shutter, or any combination of the foregoing.

20. (Original) A device manufacturing method according to claim 13, comprising supplying the immersion liquid, from the barrier member, to the space.

21. (Currently Amended) A lithographic apparatus comprising:
an illumination system configured to provide a beam of radiation;
a support structure configured to hold a patterning device, the patterning device configured to impart the beam with a pattern in its cross-section;
a substrate table configured to hold a substrate;

a projection system configured to project the patterned beam onto a target portion of the substrate; and

a liquid supply system configured to provide an immersion liquid to a space between the substrate and the projection system, the liquid supply system comprising at least one immersion liquid inlet port provided on a boundary of the space, not provided on the substrate table, and mechanically isolated from the projection system, and at least one immersion liquid outlet port being radially outwardly of the at least one immersion liquid inlet port.

wherein the immersion liquid is not substantially confined in the space so that immersion liquid can flow out of the space.

22. (Canceled)

23. (Currently Amended) An apparatus according to claim ~~[[22]]~~ 21, wherein the at least one immersion liquid outlet is on the substrate table.

24. (Currently Amended) An apparatus according to claim ~~[[22]]~~ 21, wherein the at least one immersion liquid outlet is suspended above the substrate table.

25. (Previously Presented) An apparatus according to claim 21, wherein a distance between a barrier member of the liquid supply system and the substrate is at least 50 μm .

26. (Cancelled)

27. (Previously Presented) An apparatus according to claim 21, wherein the least one immersion liquid inlet port is connected to a base frame that supports the substrate table, or a projection system frame that supports the projection system, or both.

28. (Original) An apparatus according to claim 21, wherein the at least one immersion liquid inlet port is free to move in the direction of an optical axis of the projection system.

29. (Previously Presented) An apparatus according to claim 21, further comprising an actuator configured to adjust a height, or a tilt, or both, of the least one immersion liquid inlet port relative to the substrate.

30. (Previously Presented) A lithographic apparatus comprising:
an illumination system configured to provide a beam of radiation;
a support structure configured to hold a patterning device, the patterning device configured to impart the beam with a pattern in its cross-section;
a substrate table configured to hold a substrate;
a projection system configured to project the patterned beam onto a target portion of the substrate; and
a liquid supply system configured to provide an immersion liquid to a space between the substrate and the projection system, the liquid supply system comprising at least one immersion liquid inlet port not provided on the substrate table,
wherein an at least one immersion liquid outlet port is provided only on the substrate table, or suspended above the substrate table, or both,
wherein the at least one immersion liquid outlet port is radially outwardly, relative to an optical axis of the projection system, of the at least one immersion liquid inlet port.

31. (Cancelled)

32. (Original) An apparatus according to claim 30, wherein a distance between the at least one immersion liquid inlet port and the substrate is at least 50 μm .

33. (Original) An apparatus according to claim 30, wherein the at least one immersion liquid inlet port is mechanically isolated from the projection system.

34. (Previously Presented) An apparatus according to claim 30, wherein the at least one immersion liquid inlet port is connected to a base frame that supports the substrate table, or a projection system frame that supports the projection system, or both.

35. (Original) An apparatus according to claim 30, wherein the at least one immersion liquid inlet port is free to move in the direction of an optical axis of the projection system.

36. (Previously Presented) An apparatus according to claim 30, further comprising an actuator configured to adjust a height, or a tilt, or both, of the at least one immersion liquid inlet port relative to the substrate.

37. (Previously Presented) An apparatus according to claim 30, wherein an at least one immersion liquid outlet port is provided on the substrate table.